

DRAFT
**FRESHWATER WETLAND
 MITIGATION INVENTORY**
For
**NINETEEN COASTAL
 COMMUNITIES**
Prepared for
**NEW HAMPSHIRE'S OFFICE OF STATE
 PLANNING**

Funded by



*Prepared
by*



And



In Cooperation With



September 2003

ADVISORY COMMITTEE

Ted Diers	NH Office of State Planning
Jen Drociak	NH Office of State Planning
William Hauser	NH Department of Transportation
Jennifer Hunter	NH Estuaries Project
Ellen Snyder	NH Cooperative Extension – Biodiversity Program
Lori Sommer	NH DES Wetlands Bureau

THE NINETEEN COASTAL COMMUNITIES INVENTORIED

Dover	Hampton Falls	Newmarket	Rye
Durham	Madbury	North Hampton	Seabrook
Exeter	New Castle	Portsmouth	Somersworth
Greenland	Newfields	Rochester	Stratham
Hampton	Newington	Rollinsford	

□ PROJECT OVERVIEW

•Goal

The overall goal of this inventory project is to empower local communities to protect and restore freshwater resources by providing them with data on potential mitigation sites.

In this report ***wetland mitigation*** is defined as: *an effort, such as creation of a new wetland, restoration of a wetland, or preservation or upland that protects wetland functions to offset the impact of a project by replacement of wetland functions and values lost, or by substituting the value added to a wetland or wetland system.*

Wetland Restoration

Site examples solicited from Conservation Commissions and researched by project team included:

- Filled/excavated/graded wetlands
- Ditched/drained wetlands
- Wetland where water quality has been degraded by untreated runoff or other pollutants
- Culvert restrictions in high value wetlands and/or at road crossings
- ATV crossings degrading water quality
- Wetlands dominated by invasive species

Wetland Creation

Site examples included:

- Degraded uplands (borrow pits, etc.)
- Storm water treatment wetlands
- Mechanical storm water run off treatment systems

Upland Buffer to Wetlands Preservation

The types of preservation sites researched have been based on NH Living Legacies criteria including wetlands associated with:

- Rare or exemplary natural communities
- Rare plant populations
- Critical wildlife habitats
- Rare animal species
- Un-fragmented habitats >500 acres
- Uncommon geologic formations
- Linkages to ecological reserves/protected lands
- Other high value/prime wetlands

❑ PROJECT NEED

- ❑ New NHDES Wetlands Bureau Rules for Wetland Mitigation requirements
- ❑ Mitigation projects have had a history of mixed results
- ❑ Local officials need more power in mitigation selection process
- ❑ Project pre-selection will have a higher rate of success

❑ USE OF THIS REPORT

- ❑ Site Specific Planning
- ❑ Community Planning
- ❑ Regional Planning

METHODOLOGIES

- I. Site Selection
 - ❖ Collect Preliminary Data
 - ❖ Community Meetings
 - ❖ Private Sources
 - ❖ Non-profits
 - ❖ Governmental Sources
 - ❖ Technical Reports

FORM "A" – Preliminary Data Form

METHODOLOGIES (Cont'd)

- II. Field Evaluation
 - ❖ Wetland Function
 - ❖ Classification
 - ❖ Vegetation
 - ❖ Buffers, etc.

FORM "B" Field Data Form

OVERALL TOWN MAP FOR EACH INDIVIDUAL COMMUNITY

Newmarket, NH

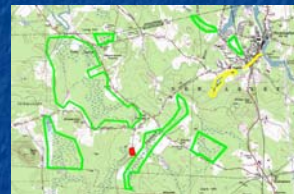


Figure 1. Newmarket, NH Freshwater Wetland Mitigation Inventory Sites

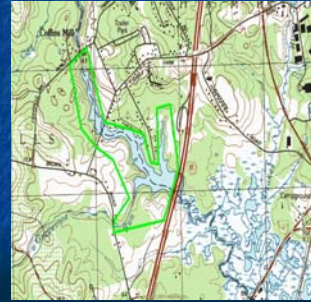
SUMMARY TABLE

Use: Choose site based on potential mitigation need.

NO1	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This mitigation site would involve the creation of a wetland area in a previously developed area. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO2	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This preservation site would provide habitat for an existing wetland on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO3	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO4	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This preservation site would provide habitat for an existing wetland on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO5	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO6	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO7	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO8	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO9	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.
NO10	Private, Unimproved, Rural, 100 Acres	0.75-2.00 Acre, 100 Acres, 100 Acres	Preservation	1.00	This site involves preservation of a 1.5 acre wetland area on the Seabrook River. The site is currently used for agriculture and is surrounded by residential development. The site is located in the town of Seabrook, New Hampshire, and is adjacent to the Seabrook River. The site is currently used for agriculture and is surrounded by residential development.

USGS MAPS FOR EACH SITE WITHIN EACH COMMUNITY

Use: Shows mitigation type and site location



DIGITAL ORTHOPHOTOGRAPH FOR EACH SITE

Use: Shows surrounding land use. To be digitized on Grant System.



PHOTOGRAPHS

Use: Visual of Potential Mitigation Site



HF11- Photo A: Looking west at stream bed of Grapevine Run and at thick vegetation shading the stream.



HF11- Photo B: Looking west at the lower portion of Grapevine Run. The stream bed and the water level are indicated.

SEABROOK, NH

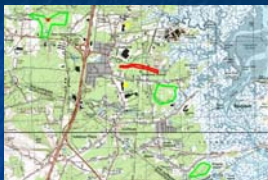
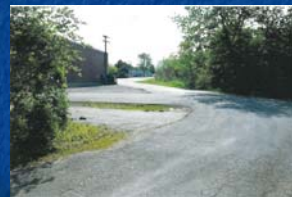


Figure 1. Seabrook, NH Freshwater Wetland Mitigation Inventory Sites

The Seabrook Conservation Commission provided the project team with ten potential mitigation sites. Seven sites were field investigated. These included two wetland creation sites for water quality protection in locations where shopping center parking lots discharge directly into stream systems. There are also two restoration sites and three preservation sites ranging in size from 26 to 67 acres. See Table 1 for a summary of field evaluated sites. Detailed information for each individual site follows the table.

EXAMPLE OF A POTENTIAL WETLAND CREATION SITE

Existing shopping center parking lot drains directly into tributary to Brown's River without treatment. Project proposes to build a wetland detention basin to detain and treat stormwater runoff.



SK2- Photo A: This is a view of the northeast corner of the shopping center where storm runoff leaves the site untreated.



SK2- Photo B: This is a view of the drainage way leading to the tributary to Browns River.

Digital Ortho
Photo of
Seabrook
Creation Site
SK2



EXAMPLE OF A POTENTIAL RESTORATION SITE

McIntyre Brook (Ditch)
in
Newington, NH



NN1- Photo A: This is a view of one of the water control dams along the ditch. Several are present.



NN1- Photo B: This is a view of the ditch showing the steep banks and the silty water.

EXAMPLE OF A POTENTIAL PRESERVATION SITE

Large Wetland Complex
Between Dame Rd and Bay Rd
In
Durham, NH

DM3

SITE SUMMARY

415 Acres of Highly valuable wetland in a large unfragmented area that is being developed for residential homes. Site lies between other conservation lands and contains NH Natural Heritage Inventory element(s). Should be a conservation priority.

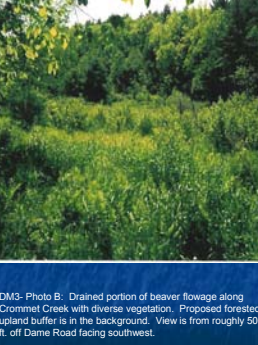
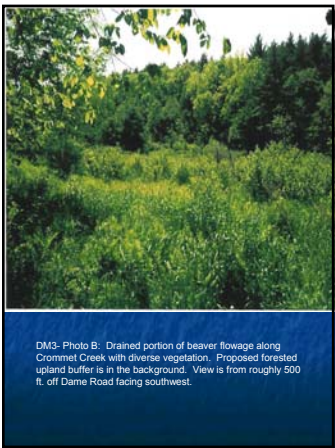
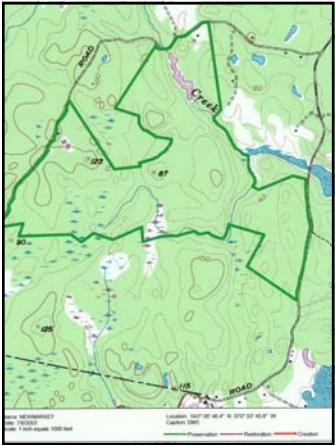
DM3

SITE SUMMARY

415 Acres of Highly valuable wetland in a large unfragmented area that is being developed for residential homes. Site lies between other conservation lands and contains NH Natural Heritage Inventory element(s). Should be a conservation priority.



View is approximately 2,000 ft. off Dams Road facing northeast.



PROJECT RECOMMENDATIONS

- Local Communities should inventory town wetlands as a way to prioritize these valuable resource areas. Regionally and locally important wetlands cannot be well protected without proper identification.
- Collaborate with NHDDES Wetlands Bureau to develop a system to differentiate between tidal and freshwater wetland permit applications for a better understanding of wetland impacts within this region.

- ## PROJECT RECOMMENDATIONS
- Local Communities should inventory town wetlands as a way to prioritize these valuable resource areas. Regionally and locally important wetlands cannot be well protected without proper identification.
 - Collaborate with NHDDES Wetlands Bureau to develop a system to differentiate between tidal and freshwater wetland permit applications for a better understanding of wetland impacts within this region.

